

SECRET

attach. to TCS-4207-63

Approved For Release 2001/08/21 : CIA-RDP78B04747A001600010076-1

DATA BLOCK READER SPECIFICATIONS

GENERAL

The reader is an optical/electromechanical/solid state device for reading and transcribing binary data from an area of 3" x 3" inches on film widths of 35mm, 70mm, 5 inch, 6.6 inch, 8 inch and 9-1/2 inch. The reader will accommodate standard film reels. Recommended maximums are:

- a. 35mm - 70 mm 1000 ft reels, 10-1/2 inch diameter
- b. 5 inch - 6.6 inch 500 ft reels, 7-3/4 inch diameter
- c. 8 inch - 9-1/2 inch 250 ft reels, 6 inch diameter

CABINET AND FRAME

The reader is constructed with a rugged framework of welded steel angle. The enclosing panels are easily removable for necessary maintenance and inspection. The right side panel is hinged for operator accessibility for changing plugboard requirements or data block formats.

ELECTRONIC UNIT AND RELAY CHASSIS:

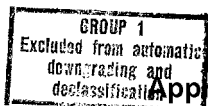
The electronic unit utilizes solid state devices and is accessible through the left side panel. Four circuits per plug-in package may be removed for servicing or replacement. The relay chassis is available at the back and may be swung out for accessibility to all areas for servicing.

FILM TRANSPORT

Film passes over neoprene coated rollers and between a glass platen separated so that the film will have minimum contact to prevent film wear or scratches. In high speed drive (forward or backward) the neoprene rollers are free to rotate with the film. In low speed drive (read or reverse) the left hand neoprene roller drives the film in either direction and film is taken up by adjustable torque motors. The system controls are so designed that interlocks make it impossible to damage the film by operator's mis-use of controls.

IMAGE POSITIONING

Any 3 inch area of the width of the film may be positioned on the data blocks by depressing the traverse IN or OUT switches which shift the entire film transport. Film tracking or skew can be corrected by rotating the entire projection plate. This will facilitate reading data information that is not photographed parallel with the edge of the film.



HANDLE VIA TALENT-
KEYHOLE CHANNELS

Approved For Release 2001/08/21 : CIA-RDP78B04747A001600010076-1

SECRET

attachment to TCS-4207-63

OPERATOR CONTROLS

After film is loaded between take up spindles, the operator may advance film at either high or low speed in order to position data image on the data block. All operator controls are by push button switches and are interlocked to prevent faulty operation. The operator presses ALIGN and either presses the traverse switches or rotates the projection plate or both in order to center the data information over the data block.

The operator has control of all constant information to be punched such as Mission number, Pass number, etc; by setting a series of thumbwheel switches previous to starting. This information will be punched on the cards ~~as determined~~ in a position determined by plugboard wiring. All card data can be so arranged.

With the alignment completed and all fixed data set, the operator will start the reading by pushbutton. An automatic frame counter will punch each frame number on the card and only needs resetting at the beginning of each new pass. This frame number can be positioned at any column on the card by plugboard.

An error circuit will indicate to the operator whenever the ~~frame being read~~ time information of the frame being read is not greater than the previous clock. At operator option, the error indicator will stop the reading and film transport for reversing the film and verifying the data image.

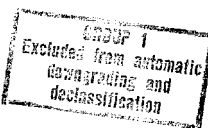
Other operator controls:

- a. Power. Single button controls on and off.
- b. Test. - Allows testing the reading block statically and indicates by panel lights what information was read.
- c. Punch. - Allows ~~pushing~~ punching of all fixed information and frame number with the exception of not punching any image data. Its anticipated use is when data information is obscured by fog and a card is required to maintain continuity.
- d. Repeat. - Allows repeating a frame already read for checking reading accuracy. It does not advance the frame counter.
- e. Reset. - Resets all electronics but not frame counter. Used whenever the key punch fails to advance a card properly such as a card jam.
- f. Lamp control or density control. - Provides the operator a control of the lamp brilliance and must be set to the base density of the film. A lamp will indicate when properly set at the beginning of each reel.

All alignment and operator monitoring is accomplished by viewing the projected data information through a front panel window

~~SECRET~~

HANDLE VIA
KEYHOLE CHANNELS
ONLY



attached to the 78B 04747A

SECRET

Approved For Release 2001/08/21 : CIA-RDP78B04747A001600010076-1

SPEED

Reading speed is limited to the speed of the type 026 IBM key punch. The speed is approximately 13 cards (or frames) per minute.

High speed operation exceeds 300 ft. per minute, used to rewind a roll of film or advance rapidly to a given section of the roll.

ANTICIPATED IMPROVEMENTS

After the equipment is operational and when time permits, the following improvements ~~will~~ be added.
CAN

- a. An indicator will warn the operator whenever the data image is not tracking properly over the data block. If possible, the alignment will be automatic.
- b. An automatic rewind will be preset by the operator to the last frame number on the reel. When the last frame is read, the film will automatically rewind to a predetermined point of the reel, either to the start of a leader or until all film is off the takeup reel, then automatically stop.
- c. A higher speed output device can be considered and the film read speed increased for higher output.
- d. Two read heads and electronics could be combined to check each other for accuracy.
- e. The electronics can be modified to accept negative film if necessary. Only positive film can be read at present.

GROUP 1
Excluded from automatic
downgrading and
declassification

Approved For Release 2001/08/21 : CIA-RDP78B04747A001600010076-1

SECRET

HANDLE WITH CARE
KEYHOLE CHANNELS
ONLY

attest. to TCS-4207-62

SECRET

Approved For Release 2001/08/21 : CIA-RDP78B04747A001600010076-1

783-4207-63
copy 1

HANDLE VIA TALENT-KEYHOLE CONTROLS ONLY

WNL

25X1A



WARNING

"This document contains information affecting the National Defense of the United States within the meaning of the espionage laws, Title 18, USC, Secs. 793 and 794, the transmission or revelation of which in any manner to an unauthorized person is prohibited by law".

It is to be seen only by U. S. PERSONNEL especially indoctrinated and authorized to receive TALENT-KEYHOLE information: Its security must be maintained in accordance with KEYHOLE and TALENT regulations.

Approved For Release 2001/08/21 : CIA-RDP78B04747A001600010076-1

SECRET